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Claims

1. A carrier device for use in an antibiotic susceptibility test ("AST"), the device releasably carrying an antibiotic related to the test, and bearing machine readable information concerning the antibiotic, wherein the device also includes orientation means for enabling an image analyser to determine an optimal reading direction of the readable information.

2. A device according to claim 1, in which the orientation means comprises means other than said machine readable information.

3. A device according to claim 2, in which the orientation means is separate from said machine readable information.

4. A device according to ~~any of claims 1 to 3~~ claim 1, in which the machine readable information comprises a code of one or more characters, whereby an image analyser comprising code reading means, can determine the orientation of the code, using the orientation means, and can adjust the orientation of the code, or an image thereof, to bring the perceived orientation into alignment with that necessary for proper reading of the code.

5. A device according to ~~any of the preceding claims~~ claim 1, in which the device comprises an AST disk.

6. A device according to ~~any of the preceding claims~~ claim 1, in which the orientation means comprises an arrangement of information presented on the device surface, in addition to the readable information.

7. A device according to ~~any of the preceding claims~~ claim 1 in which said orientation means comprises linearly-arranged information.

8. A device according to claim 7, wherein said linearly-arranged information is parallel to the optimal reading direction of the readable information.

A 9. A device according to claim 7 ~~or claim 3~~, wherein said linearly-arranged information is a printed line or lines, printed below or above the readable information.

10. A device according to claim 4, wherein said orientation means comprises an underline printed beneath the character code.

A 11. A device according to claim 1 ~~any of the preceding claims~~, in which said machine readable information or character code identifies said substance and/or its concentration.

12. An image analysis system for interpreting AST plates, each of which holds a plurality of devices each in accordance with any of the preceding claims, the system comprising:

support means for supporting an AST plate;

camera means for imaging a plate supported by said support means; and

electronic information processing means, preferably a neural net, linked to said camera means, programmed or trained to

locate an AST carrier device on said plate from among the plurality of AST carrier devices,

identify orientation means on the located carrier device, and rotate the perceived image of the located device as required so that the perceived image of a multi-character code printed on the device is brought into alignment with a proper reading direction for the code, and

read the code.

13. An image analysis system according to claim 12, which additionally determines a visible characteristic of the zone of inhibition, if any, surrounding the disk.

14. An analysis system according to claim 13, wherein the electronic information processing means includes or is linked to an 'expert system' comprising a database of AST characteristics of known micro-organisms.

15. An analysis system according to claim 13 ~~or claim 14~~, including display means for displaying the disk image.

16. An analysis system according to ~~any one of claims 13 to 15~~ claim 13, wherein the diameter of the zone of inhibition is determined.

17. An analysis system according to ~~any one of claims 13 to 16~~ claim 13, wherein the system is programmed or trained to identify orientation means which comprises an underline printed beneath the multi-character code.

18. An image analyser for use in determining the result of susceptibility testing of micro-organisms on a culture medium, comprising:

a) camera means for viewing the culture medium;

b) electronic information processing means, linked to said camera means, programmed or trained to interpret any region of visibly altered micro-organism growth in the vicinity of a susceptibility testing device, such as a disk, present on the culture medium, wherein said processing means is also programmed or trained to read a character code on the device indicative of the susceptibility reagent in the device and to interpret orientation means incorporated in or on the device

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by which the optimal reading direction of the character code can be recognised, and to adjust as necessary the actual reading direction to bring this into line with the actual orientation of the character code on the device.